SAFE WATER AND AIDS PROJECT (SWAP)
Annual Report – 2019

Safe Water and AIDS Project (SWAP)
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## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Tables</td>
<td>3</td>
</tr>
<tr>
<td>List of Figures</td>
<td>3</td>
</tr>
<tr>
<td>LIST OF ACRONYMS</td>
<td>4</td>
</tr>
<tr>
<td>FROM THE COUNTRY DIRECTOR’S DESK</td>
<td>6</td>
</tr>
<tr>
<td>FROM THE TECHNICAL ADVISOR’S DESK</td>
<td>7</td>
</tr>
<tr>
<td>SWAP’s VISION, MISSION AND CORE VALUES</td>
<td>8</td>
</tr>
<tr>
<td>Vision</td>
<td>8</td>
</tr>
<tr>
<td>Mission</td>
<td>8</td>
</tr>
<tr>
<td>Core values</td>
<td>8</td>
</tr>
<tr>
<td>COMMUNICATION</td>
<td>8</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>9</td>
</tr>
<tr>
<td>2019 IN A NUTSHELL</td>
<td>10</td>
</tr>
<tr>
<td>NETWORK AND PARTNERSHIPS</td>
<td>14</td>
</tr>
<tr>
<td>1 PROGRAMS</td>
<td>16</td>
</tr>
<tr>
<td>1.1 HEALTH COMMUNICATION AND MARKETING PROGRAM</td>
<td>16</td>
</tr>
<tr>
<td>1.2 DISTRIBUTION OF HEALTH AND HYGIENE PRODUCTS</td>
<td>19</td>
</tr>
<tr>
<td>1.3 WOMEN EMPOWERMENT</td>
<td>21</td>
</tr>
<tr>
<td>1.4 ORPHAN VULNERABLE FAMILIES AND EMERGENCY RESPONSE</td>
<td>22</td>
</tr>
<tr>
<td>1.5 SONDU SAFE WATER ENTERPRISE</td>
<td>25</td>
</tr>
<tr>
<td>2 RESEARCH</td>
<td>26</td>
</tr>
<tr>
<td>2.1 CUPS AND CASH FOR GIRLS TRIAL</td>
<td>26</td>
</tr>
<tr>
<td>2.2 AFYA CREDIT FOR IMPROVED MATERNAL AND CHILD HEALTH</td>
<td>27</td>
</tr>
<tr>
<td>2.3 TESTING MEANS TO SCALE EARLY CHILDHOOD DEVELOPMENT</td>
<td>28</td>
</tr>
<tr>
<td>2.4 POINT OF CARE CIRCUAING CATHODIC ANTIGEN</td>
<td>29</td>
</tr>
<tr>
<td>2.5 MORBIDITY OPERATIONAL RESEARCH FOR BILHARZIA IMPLEMENTATION DECISION</td>
<td>30</td>
</tr>
<tr>
<td>2.6 CARE CONSULTING</td>
<td>32</td>
</tr>
<tr>
<td>2.7 SANITATION PLATFORM IN HEALTH CARE FACILITIES</td>
<td>33</td>
</tr>
<tr>
<td>2.8 CHILDHOOD DIARRHOEA AND DRINKING WATER STUDY</td>
<td>34</td>
</tr>
<tr>
<td>2.9 COMMUNITY SCALE SOLAR POWERED WATER TREATMENT</td>
<td>35</td>
</tr>
<tr>
<td>2.10 CHRONIC KIDNEY DISEASE UNKNOWN</td>
<td>37</td>
</tr>
<tr>
<td>2.11 WATER, SANITATION, HYGIENE AND WASTE MANAGEMENT IN HEALTHCARE FACILITIES</td>
<td>37</td>
</tr>
</tbody>
</table>
2.12 LABORATORY SERVICES ........................................................................................................ 38

3 Human Resources and Administration ..................................................................................... 40
  3.1 Staffing by Gender .................................................................................................................... 40
  3.2 Staff changes .......................................................................................................................... 40
  3.3 Strategic Plan .......................................................................................................................... 40
  3.4 Procurement ........................................................................................................................... 40
  3.5 Staff welfare .......................................................................................................................... 40

4 FINANCE ....................................................................................................................................... 40

ANNEX 1 PUBLICATIONS .............................................................................................................. 43

List of Tables
Table 1: Number and type of support given ..................................................................................... 23
Table 2: Participants enrolled across 45 villages in Siaya and Vihiga Counties ............................. 31

List of Figures
Figure 1: HENNET team during the 3rd Kenyan UHC Conference .................................................. 14
Figure 2: Malaria Small Group Communication Session ................................................................. 18
Figure 3: Community Dialogue Day ............................................................................................... 19
Figure 4: CHVs Training Session .................................................................................................... 19
Figure 5: CHP performing door to door sales .................................................................................. 20
Figure 6: Pupils from Kegondi primary school who had paid a visit to SWAP Kegondi field office to learn how to treat water and store drinking water ............................................................................. 21
Figure 7: Feeding the fish in the cages at Dunga Beach ................................................................. 22
Figure 8: Some OVCs getting support from SWAP ........................................................................ 23
Figure 9: Graduation ceremony of one of the orphan .................................................................. 23
Figure 10: Transportation of items to the evacuation camps during flood ........................................ 24
Figure 11: Distribution of Food and Nonfood items in evacuation centre ..................................... 25
Figure 12: Customers queuing for water at Sondu Safe Water Enterprise ..................................... 26
Figure 13: Preparing pupils for consenting ................................................................................... 30
Figure 14: Ultrasonography team from Safe Water & AIDS Project, Vector Control Division in Kampala and Facilitators during the Ultrasonography training in Bugoigo, Uganda ................................................................. 31
Figure 15: Few latrines at this school causes a queue of boys waiting in line to use the latrine ...... 32
Figure 16: SATOPAN installed in health facility’s toilet ................................................................. 33
Figure 17: EP-Machine water treatment in the house ...................................................................... 35
Figure 18: Solar powered ozonation tanks at Ahero SWAP Model village ..................................... 36
Figure 19: Student from University of Illinois in Chicago working in SWAP lab ............................ 39
Figure 20: Chemical analysis section of the SWAP laboratory ..................................................... 39
Figure 21: Income and expenditure from funding partners to SWAP ........................................... 42
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM</td>
<td>Annual General Meeting</td>
</tr>
<tr>
<td>ANC</td>
<td>Ante Natal Care</td>
</tr>
<tr>
<td>CARECO</td>
<td>Cooperative Assistance Relief Everywhere Consultancy</td>
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<tr>
<td>CBO</td>
<td>Community Based Organization</td>
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<tr>
<td>CCG</td>
<td>Cups and Cash for Girls</td>
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<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>CGHR</td>
<td>Centre for Global Health Research</td>
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<tr>
<td>CHA</td>
<td>Community Health Assistant</td>
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<tr>
<td>CHP</td>
<td>Community Health Promoters</td>
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<td>CHV</td>
<td>Community Health Volunteer</td>
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<tr>
<td>CKD</td>
<td>Chronic Kidney Disease</td>
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<tr>
<td>CME</td>
<td>Continuous Medical Education</td>
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<td>CRS</td>
<td>Catholic Relief Service</td>
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<tr>
<td>CSO</td>
<td>Civil Society Organization</td>
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<td>DLSP</td>
<td>Diagnostics Laboratories and Systems Program</td>
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<td>ECD</td>
<td>Early Childhood Development</td>
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<td>ETL</td>
<td>Education Through Listening</td>
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<td>FIND</td>
<td>Foundation for Innovative New Diagnostics</td>
</tr>
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<td>HCM</td>
<td>Health Communication and Marketing</td>
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<tr>
<td>HCW</td>
<td>Health Care Worker</td>
</tr>
<tr>
<td>HENNET</td>
<td>Health NGO Network</td>
</tr>
<tr>
<td>ICC</td>
<td>Interagency Coordinating Committees</td>
</tr>
<tr>
<td>IEC</td>
<td>Information Education and Communication</td>
</tr>
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<td>IPC</td>
<td>Inter Personal Communication</td>
</tr>
<tr>
<td>KEMRI</td>
<td>Kenya Medical Research Institute</td>
</tr>
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<td>KENAS</td>
<td>Kenya Accreditation Service</td>
</tr>
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<td>KES</td>
<td>Kenya Shilling</td>
</tr>
<tr>
<td>KHF</td>
<td>Kenya Healthcare Federation</td>
</tr>
<tr>
<td>KIWASH</td>
<td>Kenya Integrated Water Sanitation and Hygiene</td>
</tr>
<tr>
<td>KWAHO</td>
<td>Kenya Water for Health Organization</td>
</tr>
<tr>
<td>LCC</td>
<td>Life Cycle Cost</td>
</tr>
<tr>
<td>LLITN</td>
<td>Long Lasting Insecticide Treated Net</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal Child Health</td>
</tr>
<tr>
<td>MDA</td>
<td>Mass Drug Administration</td>
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<tr>
<td>MOE</td>
<td>Ministry of Education</td>
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<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MORBID</td>
<td>Morbidity Operation Research for Bilharzia Implementation Decision</td>
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<tr>
<td>MUAC</td>
<td>Mid-Upper Arm Circumference</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institute of Health</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>NSBDP</td>
<td>National School Based Deworming Programme</td>
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<td>NTD</td>
<td>Neglected Tropical Diseases</td>
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<td>PHO</td>
<td>Public Health Officer</td>
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<td>POC-CCA</td>
<td>Point of Care Circulating Cathodic Antigen</td>
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<tr>
<td>POU</td>
<td>Point of Use</td>
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<tr>
<td>PSAC</td>
<td>Pre School Age Children</td>
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<td>RAND</td>
<td>Research and Development</td>
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<tr>
<td>SAC</td>
<td>School Age Children</td>
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<td>SBCC</td>
<td>Social Behavior Change Communication</td>
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<td>SGC</td>
<td>Small Group Communication</td>
</tr>
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<td>SWAP</td>
<td>Safe Water &amp; AIDS Project</td>
</tr>
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<td>SWASH+</td>
<td>School Water Sanitation and Hygiene plus Community Impact</td>
</tr>
<tr>
<td>SWE</td>
<td>Safe Water Enterprise</td>
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<tr>
<td>TOT</td>
<td>Training of Trainers</td>
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<td>TWG</td>
<td>Technical Working Group</td>
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<tr>
<td>UHC</td>
<td>Universal Health Coverage</td>
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<tr>
<td>UIC</td>
<td>University of Illinois at Chicago</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WASH</td>
<td>Water Sanitation and Hygiene</td>
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<tr>
<td>WRA</td>
<td>Water Resources Authority</td>
</tr>
</tbody>
</table>
It is my pleasure to present to you SWAP’s Annual Report for 2019. This was a great year in which SWAP increased new partnerships with local and international organizations including CDC Foundation, The Task Force on Global Health-NTD support Centre, Vox Impuls Foundation, Pacific Institute of Research and Evaluation and Emory University. Locally, SWAP strengthened its partnership with County Health Department in Siaya, Vihiga, Migori, Homabay, Kisumu and Bungoma Counties to implement public health program and research work. We expanded our scope of work with Population Services Kenya to increase our coverage for health communication and marketing program.

SWAP collaborated with Foundation for Innovative New Diagnostics in our study on Morbidity Operation Research for Bilharziasa Implementation Decision. Other institutions that significantly supported our work included Maseno University Ethics Review Committee and the National Commission for Science Technology and Innovation. SWAP has a vibrant water quality laboratory which is used for various studies to monitor the quality of Water. We value organizations and institutions that made use of this facility to guaranteed improved water quality to the consumers. SWAP in partnership with PATH and the British Broadcasting Corporation were featured in health check program to show case a new automated inline innovation on chlorination in water points such as boreholes and shallow wells.

Several national and international conferences were held in Kenya two of which were the first of its kind in Africa. SWAP was represented and presented in some of these including the 1st African Social Behaviour Change Conference, 1st International Conference on Neglected Tropical Diseases in Africa in conjunction with 13th Kenya MOH and KEMRI Annual NTD and Kenya Sanitation Conference. SWAP became the fund manager for the 3rd Kenya Universal Health Coverage Conference that was hosted in Kisumu County.

A new SWAP strategic plan 2020 to 2022 was developed which focuses on areas such as partnership, research and development, public health programs, Capacity building, laboratory services among others. We participated also in the validation of Kisumu County Water, Irrigation, Environment, climate change and natural resources strategic plan for 2018 to 2022. In addition we participated in the inauguration of Standards and Guidelines for School WASH infrastructure in pre-primary and primary schools in Kenya.

SWAP has become a centre of excellence for Research. All research protocol submitted were approved and authorized. New publications from research pieces were reviewed by international journals.

SWAP was awarded certificate of participation in business development service for WASH enterprises by USAID. A number of staffs were exposed to knowledge management and trainings that took place in US, Uganda and Germany.

In the last quarter of the year, the Country experienced heavy rains that caused floods and wreaked havoc. SWAP through well-wishers and friends donated food and nonfood items to support displaced families in Kisumu and Migori Counties.

I take this opportunity to thank our board of directors, staffs, partners, beneficiaries, donors and well-wishers for their enormous contributions to this tremendous progress achieved. For the first time in the history of SWAP, a female Board Chairperson was appointed following the resignation of long serving board chairperson.

I wish all readers of this report a prosperous 2020. Read on for more detailed specifics of our progress.

Alex Mwaki,
Country Director
FROM THE TECHNICAL ADVISOR’S DESK

2019, the 14th year of operations has been another busy year with several parallel running programs and research. We had a geographical scale up to Bungoma County with the Health Communication and Marketing Program. We started new research on Bilharzia in Vihiga and Siaya Counties. Another new study was an evaluation of the sanitary platform in health care facilities in Nyando and Nyakach Sub Counties in Kisumu County. A WASH baseline survey was completed and short interventions started at all public health care facilities In Rarieda Sub County, Siaya County. In collaboration with the University of Illinois we started two new studies; one a chronic kidney disease among sugar cane cutters and a second one was a community scale solar powered water treatment study. These were in addition to several other long term ongoing studies. Due to all these activities and new partnerships my level of effort was increased to 70%. My main responsibility remained establishing new and strengthening existing partnerships with various stakeholders and donors, monitoring compliance with agreements and offering technical support as co-investigator in a number of studies. I further took on the role as National Chair of the Health NGO Network (HENNET) and was appointed by the Kisumu County Director of Health as Chair of the Universal Health Conference held in Kisumu. SWAP became fund manager of the UHC Conference. Towards the end of the year following excessive rains and floods, I took the leadership in fundraising and response by distributing supplies to the affected families in evacuation camps. SWAP is active member of the humanitarian hub and worked with several other stakeholders including the county government on the response. I want to congratulate our board members under the leadership of a new chair and the management team for their dedication and commitment throughout the year. Together with the other SWAP employees there has been great team work and positive and caring attitude towards each other and the community which has enabled us to improve health and quality of life of the most vulnerable and under-served communities.

Best wishes and we look forward for meaningful engagement during 2020 and beyond.

Alie Eleveld

Technical Advisor
SWAP’s VISION, MISSION AND CORE VALUES

Vision: A healthy and empowered community where everyone enjoys high quality life.

Mission: To provide innovative solutions for improved health and economic status of communities.

Core values:
- Dynamic
  We progressively look back, and use those experiences to determine our future direction.
- Resilient
  We are resilient, and adapt to positive and negative changes and needs in society.
- Integrity
  We ensure integrity in staff, by having controls, systems, processes in place and practice zero tolerance to corruption.
- Efficiency
  We strive for better results & high productivity in products and services, and excellent execution of our duties.
- Professionalism
  We believe in maximizing the skills and expertise of our human resource in the delivery of health interventions and research, providing quality, efficient and effective services.
- Result Oriented
  We strive to provide result-oriented health services, minimizing costs and maximizing outputs.
- Innovative
  We are innovative, and change is our constant. We embrace the unknown and are willing to go the extra mile to achieve our goals.
- Diversity
  We embrace diversity among staff, partners, and stakeholders. We always ensure there is a positive spirit which underpins the way we interact with others.

COMMUNICATION
Facebook: www.facebook.com/Safe-Water-and-AIDS-Project-338690551549/?ref=hl
Twitter: @swapkenya
Website: http://www.swapkenya.org/
ACKNOWLEDGEMENTS

SWAP would like to acknowledge the financial, technical and moral support of the below listed organizations and individuals. We sincerely appreciate your donations and support.

- Ministry of Health
- Ministry of Education
- Ministry of Water, Sanitation and Irrigation
- Centers for Disease Control and Prevention
- USAID
- The Task Force on Global Health- NTD Support Centre
- Bill and Melinda Gates Foundation
- CARE International
- PATH
- Stockholm Environment Institute
- Liverpool School of Tropical Medicine
- University College of London
- University of Illinois at Chicago
- Portes Foundation
- Vox Impuls Foundation
- Maseno University Ethics Review Committee
- National Commission for Science Technology and Innovation
- Shadrack and Company
- Siemens Stiftung
- Global Giving
- Hoog tijd voor Andersom
- Harber Charitable Foundation
- Gabriele Norado
- CDC Foundation
- Kenya Medical Research Institute
- SWAP Board of Directors and Management Team
- Population Services Kenya
- UKAID/DFID
- Innovations in Health Care
- HENNET, the Health NGO Network
- KEWASNET
- KIWASH
- KWAHO
- Western Kenya Humanitarian Hub
- Lixil Corporation
- Emory University
- University of New England
2019 IN A NUTSHELL

Program

I. Health Communication and Marketing

A partnership between SWAP and PSK focused on Malaria, Diarrhoea and case management in Migori and Bungoma Counties. It is a 5 years USAID funded program. SWAP trained Community Health Volunteers on social marketing and social behavioral change communication. Community Health Volunteers (CHVs) visit households and do small group sessions, including net hanging demonstrations.

II. Distribution Model of Health and Hygiene Products

Distribution model of health and hygiene products which are sold from door to door by community health volunteers to improve health while they generate income. SWAP focuses on fast moving, local available, affordable and profitable quality products. Kisumu Office sells to partner organizations and walk ins and small and medium enterprises in local market places. Products are as well sold during emergencies such as floods, cholera response and other calamities. Products include water treatment, ceramic water filters, water vessels and hand washing stations, hand washing and bar soap, detergent, sanitary pads, menstrual cups, diapers, deworming tablets, fortified flour, condoms, cook stoves, mosquito nets, mosquito repellent soaps and solar lamps.

III. Women Empowerment with Chiela Women Group

Chiela Women is a group of fish mongers in Dunga Beach. SWAP supported the investment of a fish cage and a boat for tour guiding. The aim was to make them self-reliant. Training was offered on business skills, record keeping, group dynamics, disease prevention (HIV, Malaria, Diarrhea Prevention). Further training was on social marketing and social behavioral change communication. SWAP will continue offering mentorship and support investment in additional business ventures towards sustainability and economic empowerment of the group members.

IV. Orphans, Vulnerable Families and Emergency Response

Since 2006, SWAP is supporting orphans and vulnerable children with main support from the Harber Charitable Foundation and private well-wishers. Selected orphans are supported with tuition fees, basic upkeep and school requirements and medical insurance. Referred cases are scrutinized and cost sharing is encouraged. SWAP is active member of the Humanitarian Hub. During emergencies such as flood and cholera outbreak, SWAP supports visits to the affected families and provides material support to prevent outbreaks and mitigate the impact. In 2019, SWAP offered major support to the affected families in evacuation camps in Nyando, Nyakach and Nyatike Sub Counties with distribution of supplies. Other desperate families are supported with medical support and business start up to become self-reliant. Counseling services and referral is done to partner organizations.

V. Sondu Water Enterprise

This is a collaborative initiative between Skyjuice Foundation (Australia) and Siemens Stiftung (Germany) in partnership with SWAP. Seed funding was received from Siemens and ongoing crowd funding from Global Giving. The technology is Skyhydrant filtration. Water Enterprise sells filtered water. Public toilet service offered with hand washing station for demonstration. A local Community Based Organization (CBO) was trained to take over the enterprise. It was agreed on handing over to local CBO with probation of 3 months from January to March 2020. SWAP has continued to partner with Siemens in the monitoring and water testing of other skyhydrant filters in Western Kenya.
Research

I. Testing Means to Scale Early Childhood Development (ECD) Study

This study is funded by NIH with RAND Corporation as Prime recipient. The study tests different potentially cost-effective delivery models for an Early Childhood Development (ECD) intervention with a curriculum that integrates child psychosocial stimulation and nutrition education. Research started with a baseline survey. SWAP is implementing this study in South Rachuonyo, East Rachuonyo and Sabatia Sub Counties. Community Health Volunteers (CHVs) have completed training of 16 sessions of the international ECD Curriculum and are doing parent sessions and visiting households. Follow up survey was completed in November 2019. Booster sessions started in December 2019 and will continue in 2020.

II. Cups or Cash for Girls Trial

A partnership consortium with LSTM, CDC, KEMRI and GOK. Girls receive noon cup and cash transfer to reduce sexual and reproductive harm and school drop-out among school girls in Siaya County. 96 day secondary schools were randomly selected and 4,000 girls enrolled in the study and followed for 4 years. 4 treatments arms being measured are cash, mooncup, combined & control. SWAP is responsible for annual WASH surveys at schools and training of the girls on puberty, hygiene, use of the menstrual cup and financial literacy. Girls receive KES 1,500 per term in the cash arm. SWAP participated in the development of the national policy and strategy of menstrual hygiene management. SWAP started selling the menstrual cup as environment friendly solution.

III. Afya Credit for improved Maternal and Child Health

A partnership consortium with Stockholm Environment Institute, Nailab, SWAP and Bill and Melinda Gates Foundation. The study evaluates the impact, cost effectiveness and sustainability of conditional cash transfer in retaining rural women in the continuum of care during pregnancy, birth and post-natal period. Enrolled a total of 5,488 mothers across 48 health facilities in Siaya County. Intervention arm get KES 450 for transport (2,532 mothers) and control arm get KES 50 airtime (2,956 mothers).

IV. Point Of Care Circulating Cathodic Antigen Study

A 5 years collaborative initiative with KEMRI, CDC, MOH and MOE. The study evaluates the Point-of-Care Circulating Cathodic Antigen (POC-CCA) assay for mapping and monitoring mass drug administration (MDA) for Schistosoma mansoni control program in western Kenya. Targets children aged between 9 and 12 years old in 45 primary schools in Siaya County. Completed Urine and stool sample collection in 45 primary schools in May and June 2019. Treatment of positive cases is done in collaboration with MOH.

V. Morbidity Operational Research for Bilharzia Implementation Decisions study

A collaborative initiative with SWAP, The Task Force on Global Health- NTD Support Centre and USAID. The overall project aims to identify infection levels of S. mansoni and S. haematobium below which there is little, or no, detectable schistosomiasis-associated morbidity in Siaya and Vihiga Counties in 45 villages i.e. Siaya (29) and Vihiga (16). The overall number of participants enrolled since inception is 6,610 (Pre School Age Children =1,358; School Age Children =2,017, Teens =1,322, and Adults =1,913).
Routine sample collection is urine and stool, but for a selected cohort venous blood is collected. Samples are processed and microscopy done at the DVBD (MOH) and SWAP Parasitological laboratories.

VI. CARE Consulting

Consultancy services was offered to School Water Sanitation and Hygiene plus Community Impact Project (SWASH+) funded by Bill and Melinda Gates Foundation by the Country Director with 20% level of effort. CARE Kenya implemented the SWASH+ phase II Project whose aim was to improve the sustainability of school water, sanitation and hygiene (WASH) in order to effectively implement the Kenyan National School Health Policy. The project utilized evidence and learning from research to target key decision-makers at Ministry of Education (MOE) and Ministry of Health (MOH). The continuation phase between 2016 and 2019 was aimed at Stakeholders acting on available evidence through instituting policies to improve affordability and choice for sanitation in Kenyan schools. The objectives include: Decision-makers have access to data on use and sustainability of urban school sanitation options; Decision-makers have access to data on costs for urban school sanitation options; and the MOE has clear policies and procedures for procuring and regulating private sector sanitation services in schools.

VII. Sanitary Platform in Health Care Facilities (HCF)

The study evaluates the Feasibility and Acceptability of Novel Covered Sanitary Platforms in Healthcare Facilities in collaboration with CDC across 18 HCFs in Nyando Sub County and 19 HCFs in Nyakach Sub County. Baseline survey was completed and disseminated at County and Sub County HMTs. Installation of SATO completed in 18 intervention clinics. Follow up survey completed in November 2019. Installation in the other 50% at 19 health facilities in Nyando and Nyakach and ongoing monitoring will be done in 2020.

VIII. Childhood Diarrhea and Drinking Water Study

A partnership between SWAP, University of Illinois and Portes Foundation. The study evaluates the impact of childhood diarrhea in relation to improved drinking water using solar disinfection and normal chlorination. 105 households with at least 2 children below 5 years mapped in Nyando Sub County. Assigned households to intervention arms and trained them. Completed final round of follow up visits and sample collections in November 2019, including anthropometric and stool analysis followed by analyzing of data and dissemination of study findings. KEMRI supported processing of the stool samples.

IX. Community Scale Solar Powered Water Treatment

A partnership between SWAP, University of Illinois and Bill and Melinda Gates Foundation. Scaling the solar power water treatment using ozonation in two urban settlements, in Kisumu County. The first pilot of the solar water treatment was completed in Ahero SWAP model village. Experiments, water testing and preparation were completed. Meeting with leaders and authorities for the second site at Chuth ber market were initiated.

X. Chronic Kidney Disease Study

A study in collaboration with SWAP and University of Illinois. The main objectives of the study are to: characterize the prevalence of chronic kidney disease of unknown origin among adult residents of Muhoroni Sub County and to characterize the work of Muhoroni Sub County sugar cane cutters. Protocol submitted to Maseno Ethics Review Committee for approval.
XI. Water Sanitation Hygiene and Waste Management in Health Care Facilities

A partnership between SWAP, Vox Impuls Foundation and CDC. A baseline assessment was done of WASH and waste management in 27 health facilities in Rarieda Sub County, Siaya County. A WASH stakeholders meeting was held to share the baseline data and to seek support from the stakeholders. Short term interventions started of putting desired WASH infrastructure in place and training of health care workers and community health volunteers on hygiene promotion and social behavioral change communication.

Laboratory services

SWAP has a water lab and Lab technologist undertaking bacteriological and full chemical water test at a cost with the aim to become sustainable. The lab is mostly utilized for research testing products and technologies, but also for surveillance monitoring water quality and identifying sources of contamination.

In addition, SWAP has Parasitology lab mostly used for testing for parasites such as schistosomias and other helminths in stool and urine for research. The lab works in collaboration with KEMRI and the Government Lab.

Partnerships

- HENNET, the National Health NGO Network – Member since 2009, board member for 8 years and National Board Chair from 2017-2019. HENNET stimulates linkages between the Health NGO’s, FBO’s, Development Partners in Health, Private Sector and the Ministry of Health. HENNET has been active in advocacy, social accountability, service delivery and advisory roles in Universal Health Coverage (UHC).
- Innovations in Health Care finalist – Annual forum in US and other events as well as updates on funding opportunities
- Universal Health Coverage – Kisumu County – Conference chair and fund manager as well as member of the UHC Technical Working Group.
- University of Illinois – Students program and research with current 3 studies.
- CDC – Board member, research technical support and referral of other research partners.
- Maseno University –Ethics Review Committee
- KEWASNET, WASH HUB, KIWASH, Humanitarian Hub, CARE International
- Ministry of Health and Education and other GOK departments

Human Resources and Administration

The number of staff increased from 45 at the beginning of the year to 76 by the end of November 2019. Due to end of funding of one of the projects it was reduced to 51 staff by the closure of the year. The ratio of female and male is 1:1. International and local students further offered their service to SWAP. A strategic plan was developed by the end of 2019 for the next 3 years. One major investment was made in a new office power generator.

Finance

SWAP received the total amount of KES 115,418762 in 2019 from the following donors:

- NIH – Prime Recipient RAND Corporation
- Centers for Disease Control and Prevention/ Foundation
- Portes Foundation – Prime Recipient University of Illinois
- Bill and Melinda Gates – Prime recipient University of Illinois
- University of Illinois
- Emory University
- Bill and Melinda Gates – Prime Recipient Stockholm Environment Institute
- Siemens Stiftung Germany
- USAID – Prime Recipient PSK
- USAID – Prime Recipient the Taskforce on Global Health
- Global Giving – Crowd funding
- Harber Charitable Foundation
- Gabriele Norado – Private Well wisher
- The Hilton Foundation – Prime Recipient CDC Foundation
- CARE International
- V0x Impuls Foundation from The Netherlands
- University of New England
- Lixil Corporation
- Private donations

Other income was raised from product sales, office rent, guest house, sale of electricity tokens, photocopies, water sales and laboratory water testing.

**NETWORK AND PARTNERSHIPS**

SWAP has been board member and National Chair of the Health NGO Network until the end of October 2019 when SWAP handed the leadership to PATH during the AGM, following completion of the maximum term. SWAP will remain active member of the network.

HENNET is stimulating linkages between the Ministry of Health, Private Sector, Development Partners in Health and NGOs and FBOs. HENNET is active member of the Kenya Health Care Federation. HENNET has created several forums for partners to meet and share experience and HENNET provides regular updates to its members of over 105 health NGO’s country wide. HENNET has been active in the Universal Health Coverage agenda with social accountability, advisory, advocacy and service delivery. The Technical Advisor on behalf of HENNET attended and chaired several meetings and participated in the Kenya Health Forum in the discussion panels and during the closing ceremony.

![Figure 1: HENNET team during the 3rd Kenyan UHC Conference](image)
SWAP ANNUAL REPORT 2019

SWAP was finalist as innovator in the Innovation in Health Care network and as entrepreneur invited to the Annual Meeting held in Washington DC.

SWAP is an active member of the UHC technical working group in Kisumu and was appointed as Chair of the UHC conference held in Kisumu. This responsibility was taken up by the Technical Advisor. SWAP further became Fund Manager for Kisumu County for the UHC Conference.

Memberships

1. HENNET, the Health NGO Network (National Chair)
2. Innovations in Health Care
3. Kenya Water and Sanitation Civil Society Network
4. Civil Society Engagement Mechanism for UHC 2030
5. Kisumu UHC Technical Working Group
6. National Environmental Sanitation and Hygiene Interagency Coordinating Committee
7. Counties Health Stakeholders Forum
8. Counties WASH forums
9. Western Kenya Humanitarian Hub

Visiting Organizations and Institutions in 2019

- University of Illinois
- University of Liverpool School of Tropical Medicine
- University of New England
- North Western University
- University College of London
- University of California Berkeley
- Jaramogi Odinga Oginga University of Science and Technology
- Maseno University
- Kenyatta University
- Tropical Institute for Community Health
- Kenya Medical Research Institute
- Shadrack and Company
- Ruby Cup
- DEVEX
- Centers for Disease and Prevention US
- CDC Foundation
- The Task Force for Global Health
- USAID
- World Bank
- Stockholm Environment Institute
- PSK
- RAND Corporation
- Vox Impuls Foundation
- Siemens Stiftung Germany and Kenya
- Hoog Tijd voor Andersom
- Ruby Cup
Major meetings and Forums attended

- Inception workshop on Immunization in Accra Ghana
- HENNET CEO’s Breakfast Meeting HENNET in Nairobi
- HENNET quarterly board meetings and AGM in Nairobi
- Kenya Health Care Federation Members Meeting Nairobi
- Kenya Health Summit Nairobi
- UHC Technical Working Group Meetings
- UHC Experts Meeting
- UHC Stakeholders Forum
- UHC workshop on Social Accountability in Kisumu
- UHC Conference Kisumu
- Innovations in Health Care Annual Forum in Washington DC
- National School WASH Technical Working Group
- Siemens Conference on electric mobility
- Global Giving Workshop
- Conference on Innovations for WASH Kisumu
- Africa Conference on Social behavioural change communication in Nairobi
- HCM Annual Meeting in Nairobi
- International Neglected Tropical Disease Conference in Nairobi
- TICH Scientific Conference in Kisumu
- Humanitarian Hub Meetings
- SWAP Management Meetings, staffs monthly meeting and AGM
- Board of Directors quarterly meetings

1 PROGRAMS

1.1 HEALTH COMMUNICATION AND MARKETING PROGRAM

The objectives of this program are;

- Improved adoption and maintenance of healthy behaviors by community members aged between 15-60 years old
- Increased use of quality health services, products and information
- Increased use of information for decision making
- Strengthen capacity of government to lead, manage and govern health communication and marketing
Activities implemented during the reporting period include;

a) Leaders orientation / entry meetings in Kabuchai and Awendo Sub Counties
b) Baseline and end line surveys
c) CHVs Social Behavioural Change Communication trainings
d) Social Behaviour Change Communication
e) Household visits and Small Group Sessions
f) Weekly meeting with the trained CHVs
g) Partners meetings/ sub award site visits
h) Community challenge initiatives
i) Health days
j) Social marketing
k) Data Collection
l) Exit meeting

The following were achieved;

- Stakeholders’ forum with leaders from Suna West Sub County conducted on 30/1/2019 at Eden Hill hotel and another with Awendo Sub County leaders at Nerea hotel.
- Baseline survey conducted in 76 villages from 2 wards; Wasweta II & Oruba Ragana by 15 enumerators interviewing 663 respondents. This was done in March 2019. End line survey done in the same households between 14th to 19th October 2019 in the same households.
- A total of 238 CHVs and 20 CHAs from 17 CUs trained in February, March & May 2019 being 100% coverage in Suna West Sub County. 78 CHVs and 8 HCWs trained in Awendo Sub County from 18th to 21st November 2019.
- 36,854 individuals in 20,528 households reached with malaria IPC and 3,523 sessions conducted on different health areas reaching 70,018 individuals in Suna West Sub County. Additional 14,445 individuals in 8,291 households and 663 sessions, reaching 12,734 individuals conducted in Awendo Sub County in the months of November and December.
- Stakeholders forum in Uriri at Nerea hotel in Feb 2019.
- Sub County review meeting on 18/6/2019 to discuss how improve the heath indicators.
- PSK visit in Migori on 20/6/2019, SGCS and site visit meeting in Kisumu office on 21/6/2019.
- Planning meetings with county health committee organizing two health days i.e. Global hand washing in October and world toilet day in November.
- Community challenge orientation workshop held on 11/4/2019 at Eden Hill hotel with SCHMT, CHAs, PHOs and facility in charges.
- Rewards of 2018 champions on Malaria Community Challenge in Uriri Sub County held 9/5/2019 at the Deputy County Commissioner hall.
- 10 Continuous Medical Education conducted in the health facilities between May and August 2019.
- 3 males forum conducted with 320 males.
- Community Dialogue day conducted on 16/5/2019 at God Kwer centre.
• County World Malaria Day celebrated at Wath Onger in Nyatike on 25/4/2019. SWAP reimbursed transport to the CHVs and other HCWs.
• In Migori County, Global Hand Washing with the theme; CLEAN HANDS FOR ALL was celebrated in Awendo Sub County at Sare Primary School grounds with support from SWAP and other partners.
• Migori County hosted the national World toilet day celebrations at Rokere primary school in Kuria west Sub County. On this occasion the County was declared ODF. The activities of the day started with a brief meeting of CHMT, County Managers and partners at the Governors boardroom.
• SWAP participated from planning activities and donated 6 hand washing stations for the occasion.
• 109 meetings held with 160 in Webuye West and 10 meetings in Kabuchai with 97 CHVs.
• 2 County Health Management Team meetings were attended in Bungoma County Referral Hospital on the 14/10/2019 and 18/12/2019 respectively.
• Baseline data collected with 14 enumerators from Kabuchai Sub County.
• Focused on Malaria prevention, Diarrhea prevention and Malaria Case management, the CHV during the 2019 implementation, collected data and reported on the same.

The following were best practice;

• Joint planning both with the CHVs and MOH staffs
• Prompt payment of stipends
• Continuous support supervision at all levels
• Motivation/ branding of the CHVs

Challenges

• Community members associating bedbugs to net use
• Community sleeping arrangement hampering net utilization
• Stock outs of commodities at the health facilities.
• The weather pattern coupled with heavy rains and floods.
• Poor road infrastructure and bad terrain.

1.2 DISTRIBUTION OF HEALTH AND HYGIENE PRODUCTS
SWAP distributes and promotes health products to vendors and community members through social marketing approach to improve the social economic status of vulnerable groups. The Community Health Promoters have been empowered on income generating activities by promoting the use and sale health products through door to door. In addition, mentorship and training, and capacity building of the Community Health Promoters (CHPs) on business management and Village Savings and Loaning (VSL) to help purchase SWAP products for economic empowerment. The following activities were planned:

1. Monthly and weekly meetings with CHPs
2. Stock management
3. Sales Promotion through use of SWAP vehicles.
4. Banking sales proceeds
5. Selling of products to individuals and to shop keepers.
6. Marketing activities and exhibitions to organizations and different forums to promote and sell products.
7. Distribution of health products for emergency response.

We achieved high level of commitment from CHPs and CHVs all year round without dropout, tracking and reconciliation of stock and ensuring timely deliveries of products to vendors. In addition, good record keeping to fast truck reordering of products and monthly meetings with CHPs and successful implementation of VSL project with CHPs.
Figure 5: CHP performing door to door sales

Kegondi field office managed to make sales worth KES. 1,082,939.17 against an annual target of KES. 2,400,000. This is because the Field Officer was full time engaged in the RAND activities. All CHPS were encouraged to buy and use Ceramic Filter. This helped them be role models in championing for household water treatment at the household level and therefore made it easier for them to sell and market the product. Demonstrations done on treatment of water during the monthly meeting motivated the CHP.

The following challenges were encountered:

1. Stock outs during the first 6 months of the year.
2. Full time engagement in the RAND ECD study as well as other program related activities affected sales which made us miss out on the targets.
3. Prices of some of our products were too high and therefore a drop in the overall monthly sales. In certain instances, we were unable to compete with our competitors in the field.
4. Heavy rains towards the end of the year affected work.

SWAP will ensure availability of products to retain sales target, good planning of time to ensure all activities are done, encourage the CHPs to buy products weekly and do more of door to door sales.

Follow-ups to schools on hand washing so that they can promote hand washing buckets and exploring new market areas so that we can promote health products to increase sales in addition to close follow-ups to vendors so that we continuously retain them. SWAP will endeavour to add new products in our basket such as tissue, installable stoves, pot taps. We will train more CHVs on safe water training and business management to help in marketing of products at the community level.
1.3 WOMEN EMPOWERMENT

The objective is to economically empower Chiela Women Group towards self-reliance.

During the year 2019, not many activities took place apart from follow up on the investments of the fish cage and tour boat and ongoing mentorship. SWAP also supported them by marketing their services and referring partners to them for support.

The women managed to harvest all the fish from the fish cages. They have built a second boat without external support using the income of the boat tours. The boat tours provide them with most of the income. They have employed 3 young women who help them with the activities, such as tour guiding and marketing the services. They have been able to provide internal loans to each other which supported them to invest in individual business as well as supporting their families. They started another business of hiring of chairs which are used for community events.

The fact that the women have without much external support used their business skills to expand their business by procuring a second larger boat and the business of hiring chairs. They are the only women group who own tour boats which has given them respect and recognition. Further reports that they have been able to loan money from income generated and they reported that none of them failed to pay school fees for their children. They remained united and caring for each other, while also starting individual businesses.
The fish cage business was not continued due to water hyacinth in the lake. They lost one of their members due to cancer. The competition from other traders after many kiosks in town were demolished and businesses relocated to Dunga Beach.

SWAP has received some funding from Gabriele Norado, a private well-wisher from US to support more business ideas to expand on their business. SWAP will work with the women and come up with an investment to help them towards sustainability and self-reliance. SWAP will also link the group to other partners such as Farm Africa for more support.

![Feeding the fish in the cages at Dunga Beach](image)

**Figure 7:** Feeding the fish in the cages at Dunga Beach

### 1.4 ORPHAN VULNERABLE FAMILIES AND EMERGENCY RESPONSE

The main purpose is to provide psychosocial support for orphans and vulnerable children.

Activities included mentorship and full payment of school fees and school requirement for selected orphans and partial payment with cost sharing with the community for referred cases who are vulnerable and lacking support. Most of the funding for this program is from Harber Charitable Foundation and some support from private well-wishers, such as Gabriele Norado. SWAP is paying school fees for the children of the late Sitnah Faith, who was a former employee of SWAP with funds from friends of SWAP.

One orphan has been receiving a scholarship and other support since when she joined class five. This year she has graduated with a bachelor’s degree in Education from Kisii University. While waiting for her graduation, she started a small business of making and selling popcorn. She recently found employment at an advocate firm.

Another orphan graduated with a bachelor’s degree in Engineering and is now working with the youth service commission.
Table 1: Number and type of support given

<table>
<thead>
<tr>
<th>NO</th>
<th>Type of support</th>
<th>No supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orphans supported</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>Medical support</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Funeral support</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Community support</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Flood response</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Desperate families</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Needy students</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Theft cases</td>
<td>4</td>
</tr>
</tbody>
</table>

Three of the orphans who previously were supported by SWAP are now loyal employees of SWAP. Another orphan has been given an opportunity to do his attachment at the Finance department, which gave him additional skills and experience.

One of the orphans under full scholarship is in her final year in the University undertaking a degree in community health and development. She has been receiving full support together with her young daughter.

The demand for support is overwhelming and SWAP needs to be very selective to make sure the most vulnerable and needy cases are supported. Due to tough economic times, many orphans drop out of school.

We are not able to meet all the needs of the other orphans, who are receiving partial or one-time scholarship. This becomes a challenge if they are unable to find additional support.

Monitoring students who are far away from Kisumu is a challenge. Some of the orphans are accepted in areas outside our working area and it is difficult to stay in regular touch, rather than follow up through mobile phone.

![Figure 8: Some OVCs getting support from SWAP](image1)

![Figure 9: Graduation ceremony of one of the orphan](image2)
1.5 FLOODS EMERGENCY SUPPORT

The objective is to mitigate the impact and prevent outbreak during disasters such as flood, medical emergencies and other calamities.

SWAP has support from Harber Charitable Foundation for emergency response. This has supported towards the end of the year flood response. SWAP raised additional funding through social media to support the flood victims in Kisumu and Migori Counties who were displaced in evacuation camps. SWAP collaborated with other stakeholders and the county government to distribute food and non-food items in the camps.

![Image: Transportation of items to the evacuation camps during flood](image)

**Figure 10: Transportation of items to the evacuation camps during flood**

SWAP increased its visibility and has a good reputation in the community due to offering support during emergencies. This has led to other partners reaching out to SWAP for procurement of life saving products which are distributed to the affected families. Despite the severe flood we have not had any cholera outbreaks and have contributed to the prevention of illness. SWAP is also an active member of the Western Humanitarian Hub.

The effective collaboration with several stakeholders from County Government, administrative leaders and development partners has strengthened team work in disaster response and sharing of resources.

The excessive rain caused a lot of destruction, people have lost their livestock, crops, houses and toilets have been destroyed. The havoc hit hard the already vulnerable communities. There is more relief needed, but funding is limited.

Moving forward SWAP will continue the partnership with various stakeholders and remain active member of the Humanitarian Hub. SWAP may play a more active role in data collection assessing the magnitude of the problem following the recent flood.
1.5 SONDU SAFE WATER ENTERPRISE

The objectives of the safe water enterprise are to:

- Provide access to safe drinking water
- Build the capacity to ensure sustainability of the water enterprise
- Raise revenue from the enterprise and public toilet services
- Market and community mobilization of the safe water enterprise
- To catalyze the community involvement, engagement and responsibility of the provision of safe water.

The major activities undertaken were:

- Monitoring and maintenance of Skyhydrant filtration membrane
- Monitoring the sales and water quality
- Training of water operator and water committee members
- Establishment of partnerships with Siemens, KIWASH, KWAHO and the local CBO.
- Capacity building of the CBO in preparation of the handing over.

The Safe Water Enterprise achieved the following:

- Revenue is generated from an established public latrine with hand washing sanitation where community pays to use the facility.
- Siemens donated jerricans to be sold to community for water collection.
- The water committee managed to register as a Community Based Organization.
- Community members opened an account to aid their transparency on their collections.
- Several trainings took place during the year on business skills, financial management, and record keeping.
The community managed to change pumping of water from using a generator to an electric pump. The quality of water improved as per water quality analysis done. Local water committee is being mentored to take over the enterprise.

The following challenges were encountered:

- Heavy rainfall during the period affected water sales.
- Generator pumping affected sales margins, since a casual had to be paid to operate the pump and fuel had to be bought.
- Relocation of dumping site next to the kiosk, which is a health hazard.

The kiosk will be handed over to community for management by April 2020 following a 3 month probation period between January and March 2020.

2 RESEARCH

2.1 CUPS AND CASH FOR GIRLS TRIAL

SWAP achieved the following:

- Intervention concluded for schools in Rarieda Sub County
- WASH surveys successfully done in all the 96 schools
- Soap (1 kg detergent) distribution completed in 96 schools while in 48 schools a total of 1,739 girls received bar soaps for hand washing.
- A total of KES. 7,779,543.50 disbursed to girls in cash arm study schools
- Tracking and follow-up of girls who dropped out of the study successfully concluded
- Successfully conducted 6 Small Group working Sessions (SGWS) with 54 study focal/contact teachers facilitated by North Western University. These SGWS were aimed at improving training materials and future engagement of focal teachers on menstrual hygiene management (MHM).
Despite challenges in terms of budget cuts and a lean project team (competing priorities) SWAP managed to successfully deliver on the project contract obligations.

In November 2019, SWAP introduced the “Ruby Cup” brand menstrual cup in the “basket of goods” which is sold at SWAP through community health workers, to partner organizations, at market places and at events such as exhibitions. SWAP procured the Ruby Cup.

The following Challenges were encountered during the reporting period;

- Lack of prior communication about funding cuts and variation of contract which caused anxiety and uncertainty about the way forward. In general it had a negative impact on the financial status of SWAP.
- Some girls lacked documentation to qualify to get an Equity Bank prepaid card
- Repeat visits to schools due to absenteeism, transfers, pregnancy and other unspecified reasons made soap distribution more tasking due to need for verification of names.
- The implementing team from SWAP has become extremely lean against competing tasks and reduced level of effort of other support staff.
- There were several periods where we cannot access schools when students are undertaking examinations to sign for soap in person.
- Distribution and signing for the soap in large schools takes more time and organization of girls to receive them.

SWAP will continue to attend trial management group meetings if any, submit monthly bank statements of Equity Bank and conduct WASH Surveys in Rarieda Sub County at 12 schools as well as soap distribution to the girls.

2.2 AFYA CREDIT FOR IMPROVED MATERNAL AND CHILD HEALTH

The pilot was funded by the Bill and Melinda Gates Foundation (BMGF) with the goal of using conditional cash transfers to encourage uptake of health services and tackle the high maternal and child mortality rates. The project was implemented in Siaya County in Western Kenya, and the lessons drawn from it were thought to be replicable to other similar settings in Sub Saharan Africa.

The activities implemented included;

- Follow up on payments of airtime to participants.
- Phone surveys
- Data abstraction from the field using Antenatal Clinic Register
- Data entry process

The following were achieved

- Conducted one year follow up call to participants
- Paid incentives through the manual system
- Data abstraction for 80% of the participants who were enrolled.

Some of the challenges encountered are as follows;

- Most Phone numbers were not going through thus participants not reached
Some participants used other people’s numbers thus reaching them was not easy.

Phone network is a problem in some geographical areas.

There is low turnout of participants due to relocations and separations

The airtime account is always low on airtime and thus a challenge to initiate their payments

The system is slow when initiating and approving payments which in turn makes it hard to send most participants the incentives at a go

Technology failures of the systems set up by one of the partners

The study will continue with follow up calls to verify if clients received the cash. The participants will also be called to the facility for data abstraction from their clinic books.

2.3 TESTING MEANS TO SCALE EARLY CHILDHOOD DEVELOPMENT

This study is testing means to sustain short-term Early Childhood Development impacts and to provide policy makers with rigorous evidence of how best to expand ECD interventions in low resource rural settings.

During the year 2019, we did 13 sessions in all the 3 Sub Counties (Sabatia, Rachuonyo East and South). Prior to the sessions, we conducted Sub-Counties refresher Trainings to CHVs on the study curriculum. 7 TOTs were trained by RAND Principal Investigator Trainer for sessions 8 to 16. The main reason was for the TOT was to train the CHVs using the language they could understand best.

16 enumerators were trained to go and conduct follow up survey in the control and treatment Villages of the study. After the training of the TOTs, they trained 40 CHVs on session 8-16 across the 3 Sub-Counties.

During the reporting period, SWAP achieved the following

- 40 CHVs were trained
- 16 Enumerators trained
- Follow up Survey completed
- Sessions 4-16 were successfully completed
- Awarding of certificate of participation and completion to the CHVs, study participants (Parents) and the survey team enumerators
- Principal Investigators visited and attended some of the Trainings and the sessions.

The above achievements were realized due to Sub Counties CHVs refresher trainings, weekly calls by the Principals Investigators and constant monitoring and supervision of sessions by the Project Team.

The following challenges were encountered;

- Relocation of some of the study participants
- Heavy Rains all day long  causing postponement of some sessions
- Some of the study participants rely on farming as their economic activities hence causing poor attendance to the sessions

SWAP will continue with translation of the booster curriculum in Dholuo and Kiswahili, identify the CHVs who would be working and training on Booster sessions.
2.4 POINT OF CARE CIRCULATING CATHODIC ANTIGEN

The objective of this study is to evaluate the diagnostic performance of the POC CCA and Kato-Katz assays in mapping, monitoring and evaluation of a control program for Schistosoma mansoni in western Kenya.

The following activities were planned;

1. Preliminary results dissemination meeting, awareness and planning for school wash survey
2. Urine and stool sample collection from school age children in 45 schools
3. School WASH survey
4. Monitoring deworming in study schools
5. Establishment of journal club
6. Attendance at the 1st International NTD and 13th annual MOH NTD conference

The study successfully completed all activities for year three which include;

1. Urine 3,757 samples and stool 3,735 sample collected
2. School WASH survey completed. 45 head teachers and 1,125 pupils interviewed
3. Dissemination of mid-study preliminary results to all study stakeholders, 90% attendance of school head teachers, parent representatives, religious leaders, MOH and MOE representatives including national governance (County and Sub County Commissioners)
4. Monitoring of deworming in study respective schools
5. Attendance at the 1st International NTD and 13th MOH Annual conference by 14 staffs
6. Establishment of journal club

We received overwhelming support from all the stakeholders when preparing pupils for consenting. The best practice was observed during deworming when the field staff discovered a school that had not been dewormed in the previous year due to poor communication, helped resolve the conflict and pupils got dewormed.

There were no major challenges except the harsh terrains due to changing weather patterns. Minor misunderstanding on study objectives by some school head teachers and or health teachers; but this was always resolved amicably.

In year four survey, urine and stool sample collection from participants in the 45 schools including school WASH survey round two will be conducted. Cleaning and analysis of all data received, Monitor deworming and strengthening journal club will be continue.
2.5 MORBIDITY OPERATIONAL RESEARCH FOR BILHARZIA IMPLEMENTATION DECISION

The objective of this study is to define what constitutes control of bilharziasis related morbidity for *Shistosoma masoni* in western Kenya as tool to guide implementation decision for country programs.

The following activities were planned;

- POC CCA analysis and data entry.
- Systematic archiving of stored urine samples
- Samples collection in the field, Kato Katz Slides preparation, microscopy and results documentation.
- Aliquots of urine and serum from enrolled participants for prototype testing stored for shipment.

We managed to work on the MORBID study protocol as per the check list it and submitted to the MUERC on April 10, 2019 and conduct interviews between 11/04/2019 and 16/04/2019 to select study team including a Data Analyst, 8 Laboratory Technologists, 5 Sonographers and 8 Field Assistants. County Health Management Teams, Director of Education and County Commissioners in both Siaya and Vihiga Counties were sensitized on the study.

Upon approval of Study protocol by the Maseno University Ethics Review Committee as well as a permit from the National Commission for Science Technology and Innovation (NACOSTI), the staffs were trained. We were allowed an extra working and storage space at the DVBD for samples processing.

Total participants enrolled from 45 villages as at 29th November 2019 were 6,610 (PSAC-1,358; SAC-2,017, Teens-1,322, and Adults -1,913).
Table 2: Participants enrolled across 45 villages in Siaya and Vihiga Counties

<table>
<thead>
<tr>
<th>Description</th>
<th>Siaya County</th>
<th>Vihiga County</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bondo</td>
<td>Rarieda</td>
<td>Hamisi</td>
</tr>
<tr>
<td>PRE SCHOOL AGE CHILDREN</td>
<td>580</td>
<td>314</td>
<td>464</td>
</tr>
<tr>
<td>SCHOOL AGE CHILDREN</td>
<td>879</td>
<td>378</td>
<td>760</td>
</tr>
<tr>
<td>TEEN</td>
<td>585</td>
<td>250</td>
<td>487</td>
</tr>
<tr>
<td>ADULTS</td>
<td>864</td>
<td>374</td>
<td>675</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,908</td>
<td>1,316</td>
<td>2,386</td>
</tr>
</tbody>
</table>

The following challenges were encountered:

- Challenges in enrolling SACs and Teens in the Communities and in some schools
- Challenges in Venous Blood Collection in terms of Participants consenting.
- High expectations from the community in terms of antimalarials and Ranferon Haematenics dispensing, reimbursement of mobilizers apart from Community Health Volunteers.
- Difficulty in meeting the targets having to enroll from the community since the schools had been closed and Government baring activities in school during national exam period
- Delayed arrival of POC CCA Kits caused by glitches in new electronic system of customs clearance for all imports
- Prolonged stay in the field due to efforts to attend to/enroll all participants mobilized to the venues. This leading to delayed processing of the samples collected in a particular day.
- Regular stops by traffic police due to carrying materials at the top carrier of the field vehicles.
- More malaria cases and few drugs, some due to the fact that additional participants over the number targeted per cohort come to request for malaria testing.

Figure 14: Ultrasonography team from Safe Water & AIDS Project, Vector Control Division in Kampala and Facilitators during the Ultrasonography training in Bugoigo, Uganda
2.6 CARE CONSULTING

CARE International in USA entered into an agreement with SWAP to be responsible for encouraging the engagement of Government of Kenya stakeholders and the School WASH Technical Working Group (TWG) in SWASH+ II supplemental activities. This continuation phase between 2016 and 2019 was aimed at Stakeholders acting on available evidence through instituting policies to improve affordability and choice for WASH in Kenyan schools.

The objectives included: Decision-makers have access to data on use and sustainability of school sanitation options; Decision-makers have access to data on costs for school WASH options; and the MOE has clear policies and procedures for procuring and regulating private sector sanitation services in schools. The consulting activities included:

1. Setting up meetings for research protocols, progress and findings to be shared with key stakeholders, including getting their buy-in and potential input
2. Leading the collection of information and documents on current school sanitation policies
4. Other potential items that contribute to study goals, such as helping plan and invite attendees to the Annual Review Meeting.
5. Present results of LCC study and guidelines and review tools at School WASH TWG meeting
6. Attend and help facilitate regional workshops to launch LCC tool and guidelines for procuring private sector service delivery
7. Facilitate final SWASH+ closeout workshop on 3rd October 2019.

The Country Director provided 20% level of effort to the consulting service.

Major achievements realized included;

1. Development of WASH costing tool for Kenya schools to assist in annual budgeting. The tool was successfully piloted in schools and disseminated to stakeholders. The data used to develop the tool was collected from previous 89 rural primary schools and an additional 100 urban schools.
2. Guidelines for procurement of private sector sanitation service delivery was developed and finalized. This was submitted to Ministry of education for review, approval and dissemination.

Figure 15: Few latrines at this school causes a queue of boys waiting in line to use the latrine
3. **SWASH+ Project officially closed on 3rd October 2019 with a stakeholder’s forum in Nairobi mainly to celebrate 13 years of evidence-based learning and policy implication in Kenya. In addition, to present findings on Life Cycle Cost and development of Private Sector Sanitation Guidelines.**

### 2.7 SANITATION PLATFORM IN HEALTH CARE FACILITIES

The intervention aims to measure the following outcomes in sanitation facilities in intervention Health Care Facilities (HCFs) receiving SatoPans, as compared to controls (whose sanitation facilities will not receive SatoPans in the initial installation period):

- User-reported changes in acceptability of latrines, including smell and cleanliness
- Changes in fly counts and *E. coli* on flies
- Cleaner-reported ease of cleaning the sanitation facility, including the drop hole itself

SWAP conducted entry meetings with facility in charges and Sub County health management teams. Baseline survey was planned and dissemination of results made to CHMT and SCHMT. We also trained key staff who were to oversee the installation and maintenance of devices in the latrines. A total of 4 skilled enumerators were trained to assist with three-month post installation evaluation in 18 health facilities from the intervention arm. We used one cleaner assessment tool, Patient survey tool and Toilet/Latrine usage observation guide.

Challenges encountered included:

- Too much rain hence trouble in accessing some facilities due to poor road network.
- Sometimes it was not easy to find the cleaners at the facility due to their casual nature of work; an appointment could be booked later on with them to complete the survey.
- It was not easy to monitor patient toilet usage, since at times the patients were not using the toilets

Plans were underway to finalize data analysis and start second installation in the remaining toilets.

*Figure 16: SATOPAN installed in health facility’s toilet*
2.8 CHILDHOOD DIARRHOEA AND DRINKING WATER STUDY

A pilot scale evaluation of impacts of solar water treatment on health of children in western Kenya. The study sites include six villages namely Kanyangoro, Wawidhi, Achego, Awach, Scheme and Nyarombe randomized into 3 treatment groups.

The objectives of the study are:

1. To compare on a pilot scale the impacts of turbidity reduction and Point of Use disinfection methods on drinking water, on water quality and rates of diarrhea.
2. To Characterize on a pilot scale the impacts of water quality treatment on the microbial community present in the intestinal tract (‘the gut micro biome’) of children, including pathogens that can cause illness in children.

SWAP research team did an assessment to identify the villages that lack electricity and whose residents get their drinking water from the surface water which have high E. coli levels. The SWAP team then met the chief, village heads and CHVs to discuss the study and the possibility of the study being conducted in their villages.

Eligibility screening was done in the villages to identify households/families that did not treat water and who had at least 2 children less than 5 years. Enrollment of families then followed using an informed consent process.

During the enrollment process a baseline questionnaire was administered to all participants and which involved measuring of height, weight and skin fold of children.

All participants 105 households were trained on hygiene (proper hand wash and sanitation) and provided with interventions.

Follow-up activities (Follow-up 1, Follow-up 2, follow-up 3 and follow up 4) were conducted involving the study questionnaire, water samples collected from the households and sources for test at the SWAP water laboratory, as well as stool sample collection and analysis at both KEMRI/CGHR Enteric and SWAP parasitology laboratory.

The following achievements were made:
- Participants enjoyed receiving training and thereafter water treatment supplies that helped them in treating their drinking water and using soap for hand hygiene.
- Courtesy of KEMRI/CGHR, Diagnostics Laboratories and Systems Program (DLSP) Enteric laboratory and SWAP parasitology lab, we were able to collect, analyze stool hence identify children with illnesses that are water related who were referred to nearest facilities to receive treatment.
- The SWAP water laboratory team was also able to collect, analyze and compare the results obtained from the various water sources from the households under study.

Participants are now aware of the benefit of making their water safe before drinking. Most of the respondents trained other members of their families how to treat water and proper hand washing practices and so when mothers are away the trained members can go ahead and treat water.

Challenges encountered during the study implementation included the following:
- Nurses’ strike hindered progress especially when referral cases did not get services at the facilities.
- The heavy rainfall at the end of the year affected performance in many ways. Muddy terrain and flooded rivers during rainy season made it difficult to access households.
• Relocation of participants from one village to the other within enumeration area.

The study team will finalize the data and water sample collection in eight remaining households and stool sample collection from one household in January 2020 thus give way for analysis to continue.

![Figure 17: EP-Machine water treatment in the house](image)

### 2.9 COMMUNITY SCALE SOLAR POWERED WATER TREATMENT

This is an experimental site where ozonation is used as a means of water treatment for the community using solar energy. It focuses on the improvement of water and sanitation through various water treatment mechanisms including the point of use ozonation of varied water sources into safer water for consumption by the community which the treatment site has been installed.

The objectives are to produce safe water for consumption to the communities and to help in the reduction of waterborne diseases through the provision of safe treated water to the communities.

The following activities were planned;

- Water Pumping
- Alum weighing and dosing to the water
- 2-3 hours of ozonation of the final water in the clear tank.
- Turbidity test at four different stages of water treatment.
- Sample collection for bacteriological analysis to be taken to SWAP lab for test.
- Back washing of water treatment filter system.

The study was able to achieve the following;

- Experiments have been done at the SWAP water lab to determine the bacteriological safe levels of the water sample from Ahero Model Village. This has been a success as the levels determined exhibited safe levels for human consumption.
• Water Resources Authority (WRA) assessment was done by the regional quality manager to determine the standard of Ahero site and the technology used for water treatment. This was very successful for samples taken from the area both the final sample and the raw water.
• Bacteriological and chemical analyses were done by WRA to determine the quality and an authorization certificate issued certifying that the water is of good quality. The abstraction certificate is also to be issued by WRA.
• KEBS has already given positive bacteriological analysis results showing that the water meets the recommended standards.
• There is significant turbidity reduction from raw water to final outcome.

Challenges experienced were as follows;

1) Heavy rains affected the scheduled meetings and ozonation in Ahero experiment site.
2) Power outage at times affected ozonation time.
3) De-colorization of pipes by ozone gas had been an issue though it had been solved through use of Teflon tubes which do not react with ozone

The study team will ensure that;

• The site to be used as an experimental site has all the documentations and approvals.
• The land lease agreement is renewed.

Figure 18: Solar powered ozonation tanks at Ahero SWAP Model village
2.10 CHRONIC KIDNEY DISEASE UNKNOWN

The objectives of this study are to characterize the prevalence of chronic kidney disease of unknown origin among adult residents of Muhoroni Sub County and to characterize the work of Muhoroni Sub County sugar cane cutters. A total of 1,000 households will be visited.

The following activities were achieved;

- Contact and consultations with Muhoroni County Hospital management and laboratory team on field staff recruitment, training, sample storage and transport to KEMRI/JOOTRH laboratory.
- Successful consultations MoU with KEMRI/ JOOTRH laboratory on sample analysis
- Recruitment of 13 field staffs
- Resubmission of study protocol to Maseno University Ethical Review Committee
- Initiation of procurement process for study equipment and supplies

The challenges encountered are;

- Delay of approval for the study protocol beyond December 2019 led to a possible February 2020 start of activities instead of a January 2020 start.
- Received more than 300 applications, hence the shortlisting process took more time.

The study team will follow-up on final review of study protocol by MUERC and application of NACOSTI permit for the study. In addition, conduct study entry meeting with Kisumu County and Muhoroni Sub County Health Management Team and Train field staff (phlebotomists and enumerators).

2.11 WATER, SANITATION, HYGIENE AND WASTE MANAGEMENT IN HEALTHCARE FACILITIES

The study is implemented in 27 health facilities of Rarieda Sub County and the objectives are;

- To increase access to safe water, toilets and hand washing facilities which will reduce Health acquired infection to patients and health workers.
- Reduce risk of outbreaks deadly transmitted diseases
- To improve trust of patients in health care facilities

The planned activities were as follows;

- Conducted a needs assessment at all the health facilities
- Train Health Facility in-charges and WASH personnel
- Distributed WASH supplies to all health facilities and mentor the team on guidelines of WASH
- Monitoring of implementation progress.

The following were achieved

1. Conducted baseline survey in all 27 public health care facilities in Rarieda Sub County
2. Conducted FGDs and qualitative in 12 health facilities
3. Trained 34 in charges and WASH officers for 2 days on 31st Oct and 1st Nov 2019
4. Presented Rarieda Sub county WASH baseline findings and what we were expected to do.
5. Met with WASH stakeholders and partners on 22nd of Oct 2019 to share the baseline report
6. Distributed WASH supplies to all 27HCF to fill in the gaps as per baseline report.
7. Trained at least 10 CHVs and 2CHAs in all the 27 health facilities.
8. Begun monitoring to see the implementation status.
Engaging County and Sub County at all levels of WASH implementation and working closely with facility staff was a best practice.

Challenges encountered were as follows;

1. Two facilities were not represented in the training, planning to train them after distributing WASH health materials.
2. There were a lot of expectations from the participants side e.g. some in charges expected SWAP to donate for them water tanks, give the appropriate protective gears to help the cleaners when doing cleaning, build the incinerators because currently they were facing a challenge with disposing sharps.
3. There will be no confidentiality of the results we gave in each facility, due to reshuffling of the in charges but within the Sub County-

The study team will conduct periodic survey on efficiency and utilization of equipment, continuous on job training to staff and strengthen weak areas of implementation and monitoring. The plan is to follow up after 6 months of monitoring with an end line survey to assess impact.

2.12 LABORATORY SERVICES

SWAP Lab has gone through initial assessment by KENAS. It can be used to analyze approximate 100 water samples in a day. The technology used in the lab is IDEXX quantity tray method using Colilert reagents or membrane filtration method technology using (coli-blue broth media for Coliforms and E-coli identification).

Colilert Reagent is used for the simultaneous detection and confirmation of total coliforms and E- coli in water. Colilert utilizes nutrient indicators that produce color and/or fluorescence when metabolized by total coliforms and E. coli. When the reagent is added to the sample and incubated, it can detect these bacteria at 1 CFU/100ml within 24 hours with as many as 2 million heterotrophic bacteria/100ml present. The presence/absence test is used for drinking water samples and the quanti-tray enumeration procedures are used for raw water samples.

SWAP lab also conducts testing of water for quality control on a regular basis for Ahero model village site, where ozonation treatment of drinking water is piloted in a large scale. Samples are taken to the SWAP lab for both physiochemical and bacteriological tests. The sampled water results are then compared to a standard CFU determinant to ascertain how safe the water is through this quantification process.

The lab also supports other studies such as the Childhood Diarrhea and Drinking Water in Western Kenya, which involves the comparatively analysis of different water treatment mechanisms to their effect on waterborne diseases within a total of 105 households under study. It involves the analysis of both water (physiochemical) and stool (clinical) samples to ascertain this theorem.
Chemical analysis of potable water is also done by SWAP lab. A number of parameters can be done using the facilities within the SWAP laboratory. This is due to the presence of DR 3900 spectrophotometer, pH meter, Turbidimeter and multiple probes which analyses a number of samples both in situ and within the laboratory.

A number of institutions and individuals are SWAP laboratory customers and are collaborating and appreciating the accuracy, timely and realistic results. These include Siemens Stiftung, Care Kenya, WSUP, Davis and Shirtliff, KWAHO, Farm Access, KIRDI, Humanist among others.
3 Human Resources and Administration

3.1 Staffing by Gender
At the beginning of the year, SWAP had a workforce of 43 staff, 21 females and 22 males, and by end of December 2019, a total of 48 staff. These staffs are spread out in 6 Counties where SWAP operates including Kisumu, Siaya, Migori, Homabay, Bungoma and Vihiga. The headquarters is in Kisumu and field offices are located in Kegondi in Vihiga, Awendo in Migori, Kabuchai in Bungoma Counties respectively. Throughout the year, SWAP received students from international research institutions who were attached to various Projects and stayed in SWAP’s Guest house.

3.2 Staff changes
SWAP allows the recruitments of its staff to be done after identifying the need for a certain post, assessing the financial situation and agreeing on the terms of payment before posting and making the position description for advertisement. During the year, new staffs that were recruited by SWAP through various interviews which had been advertised locally, short listing and selection were done and the candidates placed. The staff recruited included Study Coordinator, Data Analyst, 9 Lab technicians, 11 Field Assistants, 5 Sonographers, Project Officer, Assistant Project Officer, Procurement Officer, M & E and Data Officer and a Driver. During the year, M & E Manager and Research Assistant tendered their resignations. Recruitment and placement of a new M & E/Data Officer was done to fill the position. Among the 33 staffs that were recruited, 24 of them, their contracts ended before the end of the year. We recruited an Accounts Assistant intern and 3 Research Assistants interns. We also had 4 students on industrial attachment in Finance and Research departments.

3.3 Strategic Plan
Strategic planning for 2020-2022 was successfully developed and shared.

3.4 Procurement
- Pre-qualification of suppliers for 2019/2020 financial year was successfully done.
- SWAP procured a new 35 KVA heavy duty and powerful diesel run generator which is serving all the two buildings.

3.5 Staff welfare
SWAP has its welfare with everyone involved in the contribution whenever there are celebrations, funerals or any called for activity in helping staffs financially as a team. We had one staff who got married during the year and two new born children.

4 FINANCE
The objectives of the finance docket are;
- To safeguard the funds, properties and other assets of SWAP.
- To ensure that all Organization’s financial transactions are correctly recorded and accounted for.
- To standardize the accounting treatment and the financial administration of all SWAP transactions at all levels of organizational structure.
• To maintain a high degree of consistency of accounting treatment of the financial transactions in all SWAP Project establishments.
• To record and control all payments and revenue to and from income generating activity.
• To identify the financial obligations and commitments of the organization
• To embrace international accounting standards and best practices.

Key activities performed by the department included;

• Budgeting and budgetary control
• Budget tracking and variance analysis
• Preparation of financial documents
• Preparation of management accounts on monthly basis
• Petty cash Management
• Stock and Assets management
• Preparation and submitting donor reports
• Filing and Submitting statutory returns
• Cash flow projection and forecasting
• Preparation of financial statements for donor and external audits

The department achieved the following;

• 100% PAYE tax, NSSF, NHIF and NITA compliance
• Timely submission of donor reports
• New donors and continuation of last year donors
• Funds Management on behalf of other organizations

SWAP has a finance policy guideline that upholds the financial strength, accountability and stability of financial transactions. It undergoes annual reviews and will be amended as required for the efficient management of SWAP funds.

Our financial records are audited and reviewed by both donor and external auditors. We have embraced bulk mpesa payments to reduce the risk of handling cash. This has improved the relationship between SWAP and other stakeholders and partners. We adhere to KRA, NHIF NITA and NSSF rules and regulations through timely filing and payment of statutory dues.

A few challenges were experienced including;

• Funding gaps since most projects are based on implementation periods which leave the gap after the expiry of such timelines
• Late disbursements of donor funds since most donors embrace reimbursement approach which takes long procedures and time.
• Dwindling IGA project income due to stiff competition in the market.

The department will continue to focus on product diversification and differentiation to increase IGA income, focusing on proposal writing and cost reduction through elimination of unnecessary expenses cost sharing and comparative analysis during bidding process. In addition, budgeting forecasting and variance analysis.
Below shows the income received for the various research and programs run by SWAP. SWAP received the total amount of KES 115,418,762 in 2019 from grants.

Figure 21: Income and expenditure from funding partners to SWAP
ANNEX 1 PUBLICATIONS

Published Papers – Research Findings -Evidence of Impact

1. Center for Disease Control and Prevention – Atlanta, Department of Health and Human Services: Baseline Data from the Nyando Integrated Child Health and Education Project. MMWR – CDC Weekly report – Vol 56 October 22, 2007

2. Freeman MC, Quick RE, Abbott DP, Ogutu P, Rheingans R.- 07-03-2009: Increasing equity of access to point of use water treatment products through social marketing and entrepreneurship: a case study in Western Kenya. Journal of Water and Health


20. Bobbie Person Owuor m, Ogabe L, Jefferds M E, Cohen A: It is good for my family’s health and cooks food in a way that my heart loves; qualitative findings and implications. Int. J. Environ. Res. Public Health 2012,


39. Caroline Ochieng, Hassan Haghparast Bidgoli, Neha Batura, Aloyce Odhiambo, Geordan Shannon, Andrew Copas, Tom Palmer, Sarah Dickin, Stacey Noel, Matthew Fieling, Sangoro Onyango, Sara Odero, Alie Eleveld, Alex Mwaki FedraVanhuyse and Jolene Skordis, Conditional Cashs transfers to retain rural Kenyan Women in the Continuum of care during pregnancy, birth and the postnatal period: protocol for a cluster controlled trial, BMC 2019 Open Access


